AOAC Official Method 988.06
Specific Gravity of Beer and Wort
Digital Density Meter Method
First Action 1988
Final Action 2008
ASBC–AOAC Method

(Applicable for the determination of Specific Gravity of Beer, Wort and non pulpy fruit juice beverages.)

A. Principle
Natural frequency of hollow oscillator varies with density of material that fills tube. Electronic measurement of a time period is converted to digital display of density.

B. Apparatus and Reagents
(a) Digital density meter.—Mettler Toledo, Inc. DMA 46 (current Models DE40, DE51, DE45), or equivalent (Mettler Toledo, Inc., 1900 Polaris Pkwy, Columbus, OH 43290, USA; www.mt.com).
(b) Hypodermic syringe.—As recommended in density meter instructions.

C. Calibration of Density Meter
Calibrate digital density meter at 20.0°C ± 0.1°C with air and H2O. Use hypodermic syringe to inject liquids into analysis tube. Fill tube completely so no gas or solids are entrapped.

D. Preparation of Test Sample
Decarbonate beer samples as in 920.49 (see 27.1.01). Beer must be brilliantly clear and free from any particulate matter, and must be at 20°C test temperature. Filter if required.

E. Determination
Inject clear, decarbonated test sample into filling tube. Be sure no gas is entrapped in tube. Let thermostated analysis tube reach thermal equilibrium (0.5–4 min). Obtain specific gravity measurement.
